



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

14A

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/612.792

07/02/2003

Adam Jude Ahne

2002-0168.01

5453

21972

7590

08/23/2006

LEXMARK INTERNATIONAL, INC.
INTELLECTUAL PROPERTY LAW DEPARTMENT
740 WEST NEW CIRCLE ROAD
BLDG. 082-1
LEXINGTON, KY 40550-0999

EXAMINER

CULLER, JILL E

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,792

Applicant(s)

AHNE ET AL.

Examiner

Jill E. Culler

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 1-45 and 56-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-49, 51, 53 and 54 is/are rejected.
- 7) ☒ Claim(s) 50, 52 and 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 46, 47, 48, 49, 51, 53, and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto (US 4,604,632).

Insofar as structure is broadly recited, Matsumoto teaches the claimed apparatus. With respect to claims 46 and 49, as shown in Figures 1A and 1B, Matsumoto teaches an apparatus comprising a printhead carriage 26 for carrying a printhead 26A. Figure 2 also shows a perforator carriage 30A for carrying a perforator mechanism 31. Insofar as structure is recited, Figures 1B and 4 teach an isolation damper 27 coupling the printhead carriage 26 to the perforator carriage 30A.

With respect to claim 47, as shown in Figure 1A, and as outlined in column 2 lines 16-26, Matsumoto teaches having a motor for driving each of the carriages in a reciprocating manner.

With respect to claim 48, as shown in Figures 1A and 1B, Matsumoto teaches a mid-frame 23 positioned to support the back side of the sheet of print media, the mid-frame 23 including a trough 45 for receiving the perforation device after the perforation device passes through the sheet of print media.

With respect to claim 51, as shown in Figures IB, 3A, and 3B, Matsumoto teaches the perforation device is one of a needle 31C and a blade (the edge portion of 45).

With respect to claim 53, insofar as structure is recited, Figures 3A and 38 of Matsumoto teach multiple perforation devices (31D, 31C).

With respect to claim 54, as shown in Figure IB, Matsumoto teaches a first roller 15a positioned upstream of said perforation forming mechanism, and a second roller 15b positioned downstream of said perforation forming mechanism, the sheet of print media being suspended between said first roller and the second roller during perforation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 46, 47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen et al. (US 5,363,123) in view of Schmitt (US 4,564,470).

Insofar as structure is broadly recited, Petersen and Schmitt teach the claimed apparatus. With respect to claims 46 and 49, as shown in Figures 1 and 2, Petersen teaches an apparatus comprising a printhead carriage 20 for carrying a printhead.

Art Unit: 2854

Figure 2 also shows a cutter carriage 40 for carrying a cutting mechanism. Insofar as structure is recited, Figures 2-4, and column 3 lines 25-35 teach an isolation damper (70, 80) coupling the printhead carriage to the cutter carriage. In fact, Petersen teaches all the claimed subject matter, except Petersen teaches a cutter as opposed to a perforator and perforator carriage.

Schmitt teaches a printing processing apparatus that includes a longitudinal cutter similar to that of Petersen. As outlined in column 3 lines 50- 60, Schmitt teaches an embodiment in which a cutter is substituted for a perforator.

In view of this teaching of Schmitt, it would have been obvious to one of ordinary skill in the art to substitute a perforator as taught by Schmitt in the apparatus of Petersen, for the advantage of having optional functions such as perforating and/or scoring, as taught by Schmitt in column 3 lines 52-55.

With respect to claim 47, column 1 lines 41-43 teach the primary reference Petersen having a motor for driving each of the carriages in a reciprocating manner.

Allowable Subject Matter

5. Claims 50, 52 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 50 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, including a

Art Unit: 2854

perforation maintenance station including an abrasive member for sharpening said perforation device at a location outside of a perforation zone of said perforation device

Claim 52 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, including a controller configured to select at least one of a vertical perforation resolution and a horizontal perforation resolution.

Claim 55 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, including a D-shaped guide rod, a motor coupled to the D-shaped guide rod, and a controller connected to the motor to operate the motor to impart a rotation to the D-shaped guide rod.

Response to Arguments

6. Applicant's arguments filed April 17, 2006 have been fully considered but they are not persuasive.

With respect to applicant's argument that Matsumoto has only one carriage instead of two, although applicant refers to head mount 1 as this carriage, as stated in the above rejection, Matsumoto teaches that printhead carriage 26, clearly carries the printhead and perforator carriage 30A carries the perforator mechanism. There is nothing in applicant's claims which contradicts this interpretation of the prior art and therefore the reference is considered to meet the claim limitations.

With respect to applicant's argument that pin 27 of Matsumoto is not positioned to couple the recording head to the perforating lever, as they are both mounted on the pin, it clearly does serve to couple the two elements. There is nothing in applicant's claims which contradicts this interpretation of the prior art and therefore the reference is considered to meet the claim limitations.

With respect to applicant's argument that nothing in Matsumoto discloses, teaches or suggests that pin 27 is an isolation damper, there is nothing in applicant's claims which limits the function of this element to a particular amount of isolation or dampening. Given it's broadest reasonable interpretation, any structural element which connects the two elements will function as an isolation damper. Therefore, as there is nothing in applicant's claims which contradicts this interpretation of the prior art, the reference is considered to meet the claim limitations.

With respect to applicant's argument with respect to claim 54, that the sheet of print media is not suspended between first roller 15A and second roller 15B of Matsumoto, Figure 1B clearly shows the sheet of print media engaging both rollers during perforation and therefore, given the broadest reasonable interpretation of the claim language, the sheet is suspended between the two rollers.

With respect to applicant's argument that Petersen et al. does not disclose, teach or suggest an isolation damper coupling the two carriages, Petersen et al. teaches the two elements are coupled by an element 70,80. As discussed above there is nothing in applicant's claims which limits the function of this element to a particular amount of isolation or dampening. Given it's broadest reasonable interpretation, any structural

Art Unit: 2854

element which connects the two elements will function as an isolation damper.

Therefore, as there is nothing in applicant's claims which contradicts this interpretation of the prior art, the reference is considered to meet the claim limitations.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill E. Culler whose telephone number is (571) 272-2159. The examiner can normally be reached on M-F 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jec



REN YAN
PRIMARY EXAMINER